

The Cultural Significance of Medicinal Plants in Treating Chronic Conditions

Odile Patrick Thalia

Faculty of Biological Sciences Kampala International University Uganda

ABSTRACT

Medicinal plants have played a crucial role in healthcare for centuries, particularly in managing chronic conditions. This paper explores the cultural significance of medicinal plants, their historical use, and the integration of traditional and modern medical systems. It examines how ethnobotanical knowledge is preserved, shared, and adapted across cultures and discusses the challenges of incorporating traditional healing into contemporary healthcare. While medicinal plants offer accessible and cost-effective remedies, issues such as standardization, scientific validation, and ethical concerns remain. Future research should focus on bridging the gap between traditional wisdom and modern pharmacological studies to enhance healthcare accessibility and effectiveness.

Keywords: Medicinal plants, ethnobotany, chronic conditions, traditional medicine, cultural healing practices, phytotherapy, herbal remedies.

INTRODUCTION

The development of effective medicinal plants for addressing chronic conditions particularly those not directly linked to major public health crises often faces challenges related to health behavior and accessibility. A key issue lies in the public's demand for, yet limited access to, familiar medical environments and phytotherapeutic (plant-based) products. This situation is compounded by several factors, including the lack of scientific support for herbal practitioners, limited institutional endorsement of validated herbal treatments, and an overall insufficiency in integrating medicinal plants into mainstream healthcare approaches. These challenges highlight the need for strategies that protect the public from misinformation and misuse, ensure proper labeling (especially for idiopathic conditions), and promote the publication and dissemination of validated herbal therapies. The potential benefits of these strategies are significant. They could influence the way pharmaceutical products are processed and delivered, enhance patient safety, and improve public health outcomes. When implemented collectively, these strategies may have a synergistic effect, leading to safer and more effective use of traditional medicine. A noteworthy case is the treatment of central nervous system disorders, an area in which herbal remedies have a long-standing tradition in Greek culture. This tradition remains vibrant, with many individuals still relying on home-based plant therapies. However, the high costs and long waiting times in both public and private allopathic healthcare systems often limit access to conventional treatments, making traditional remedies a preferred alternative for many. At the same time, growing concerns and emerging evidence about adverse effects associated with conventional pharmaceuticals further reinforce the public's interest in herbal alternatives [1, 2].

Historical Overview of Medicinal Plants

The unplanned meeting between hominoids and the medicinal plants they were to use must have occurred deep in prehistory. Since then, humans have entered into binding relations with the phytosphere that are

manifold and varying. The choice of a medicinal plant and the nature of its application are influenced by a multitude of neural, cultural, and natural inputs related (but not limited) to sensory properties, chemical constituents, symbolism, major emergencies, and general understanding of how to treat diseases. Human predilection for certain plant species may be the result of trial-and-error selection, association with certain environments (e.g., restricted habitat, altitudinal range, affinities within the plant community), local availability, trade, renunciation, divine revelation, and age-old use. Considerations and beliefs about disease might also prevent the uses of certain taxa and promote others. Many ancient cultures have viewed disease as a punishment, curse, sin, or malefic action by the divinity by someone able to appeal to the gods, thus treating perforce patients in a magical rather than physical way. Babylonians and ancient Egyptians were not the only drug purveyors in the ancient Near and Middle East. A recently deciphered Greek document composed in the first century C.E. attests that the Lycian Xanthos was a drug provider of much repute in Anatolia during the Hellenistic period over 2000 years ago [3, 4].

Cultural Perspectives on Healing

This paper examines cultural perspectives and practices in healing with medicinal plants, comparing various approaches. Healing encompasses physical, emotional, and spiritual aspects, integrating traditional medicinal practices and plant use. Examples illustrate how respecting local healing wisdom fosters sustainable health and well-being. Indigenous health practices are rooted in local biophysical and cultural resources, forming a living tradition essential for community survival. These practices are unique to each culture and complement mainstream health care. However, unequal power dynamics hinder the integration of traditional healing into health systems and local cultures into environmental governance, risking both health and cultural heritage. The revival of medicinal plants has brought joy, alleviated concerns about medicine affordability and treatment accessibility. Elders who gather medicinal resources feel empowered, expressing a spiritual connection to nature's healing properties. Healing transcends material wealth; it involves holistic health practices like fasting, meditation, prayers, and rituals with medicinal plants. Despite cultural differences, similarities exist across religions and beliefs, showcasing a universal understanding of healing that recognizes the individual as a microcosm encompassing physical, emotional, and spiritual dimensions. Diverse health systems create varied paradigms shaped by living conditions, social structures, cosmologies, and perceptions of illness, ultimately reflecting the cultural identities and heritage of different peoples [5, 6].

Ethnobotany and Its Importance

Ethnobotany, the study of indigenous people's relationships with botanical resources, has gained prominence recently, especially with the Convention on Biological Diversity. It highlights local plant use, cultural practices, and belief systems that value plant resources. This is crucial for conserving biodiversity and meeting human needs. Efforts focus on documenting local plants and their uses while implementing sustainable management practices. Ethnobotanical studies reveal that traditional ecological knowledge (TEK) results from a dynamic relationship with specific environments, combining cognitive and empirical experiences. This wealth of knowledge can lead to new products, particularly pharmaceuticals derived from plants, such as Quinine from *Cinchona* spp. or Strychnine from *Strychnos nux-vomica*. Ethnobotanical knowledge offers economic benefits for local communities, as understanding biological resources is vital for those who gather plants or trade forest goods. Neglecting this knowledge risks losing valuable resources and puts communities at a disadvantage against commercial entities that may exploit these resources or threaten traditional practices. Consequently, the fear of losing essential biological resources often motivates local management initiatives or usage restrictions [7, 8].

Medicinal Plants and Chronic Conditions

The rise of chronic illnesses requiring long-term care, combined with the unavailability and ineffectiveness of necessary drugs in developing countries, has sparked renewed interest in traditional medicine for cost-effective and accessible remedies. This shift has led to increased research into traditional medicinal preparations, primarily derived from plants, which are gaining acceptance due to their effectiveness in managing public health issues. Medicinal plants, valued since ancient times, are now recognized for their therapeutic potential, drawing global focus. Herbal remedies can alleviate symptoms and enhance quality of life, even as the use of standard pharmaceutical agents persists. While many studies highlight the benefits of various plants, some medicines remain scientifically unverified despite their widespread use. Numerous plants are identified as effective for chronic conditions through both traditional practices and scientific investigation backed by clinical studies or chemical evidence supporting their efficacy. Addressing chronic conditions with plant-based treatments should ideally follow a holistic

approach integrating behavioral, nutritional, lifestyle changes, and pharmacological options. This encourages practitioners to adopt multi-plant therapies, especially critical in developing countries with rich traditions of using varied plants. Nonetheless, globalization has led to the rise of single-plant remedies, suggesting flexibility in treatment approaches. While the potential of medicinal plants is promising, challenges remain regarding standardization, therapeutic dosages, and their roles in managing chronic conditions [9, 10].

Traditional Vs. Modern Medicine

Medicine is an evolving practice influenced by medical traditions, scientific knowledge, and resource availability. The significance of addressing widespread illnesses like cardiovascular diseases and diabetes has increased due to rising life expectancy and globalization. Pharmaceutical research now emphasizes plants used in Traditional Medicine, a key source of therapeutic compounds. This knowledge typically comes from historical information about locally made therapies, conveyed through sayings and medical texts. Since the World Health Organization's 1978 global strategy for Traditional Medicine, interest has surged, leading to 196 published TM systems in MEDLINE, including Traditional Chinese Medicine and Cuban Natural Medicine. Adapting modern healthcare to TM practices is crucial and remains a subject of debate. Traditional Medicine often takes a holistic approach, focusing on treating the entire patient and enhancing immune function while prioritizing emotional balance. It may involve suggesting lifestyle and dietary adjustments. In contrast, modern medicine primarily addresses symptoms through clinical and laboratory examinations, often neglecting underlying causes. Traditional Medicine emphasizes prevention, whereas modern practices are evidence-based. Moreover, Traditional Medicine practices can be tailored to the patients' cultures, enhancing effectiveness. The World Health Organization has defined these culturally relevant aspects and developed guidelines for their appropriate use. TM has much to offer modern healthcare regarding disease control strategies and alternative therapies. However, a key question arises: How can one integrate cultural medicine that may conflict with modern scientific principles? Solutions may include dialogue between open-minded Western practitioners and culturally informed TM providers and understanding the cultural rationalities behind TM practices. Nonetheless, validating these practices scientifically poses challenges. Exploring cultural drug therapies and their scientific evidence reveals both potential and limitations. A new perspective on local knowledge in TM practices is taking shape to foster mutual respect between these diverse medicinal approaches for improved human health [11, 12].

Cultural Practices and Beliefs

What practices and beliefs regarding the use of medicinal plants are evident in the function of rituals, ceremonies, and community gatherings connected to the healing process? What role does the belief in the efficacy of medicinal plants play, especially concerning plants' purported supernatural origins or powers? How is knowledge about the use of medicinal plants preserved and shared within local communities, particularly considering the role of storytelling and oral traditions in this process? What local customs are there that inform the selection and preparation of herbal remedies, and how have these evolved through time? What losses and revitalization are possible in traditional knowledge and practices concerning the use of medicinal plants in the face of globalization and other external risks? Exploring the practices of medicinal plants opens a window to the broader cultural practices in which such plants are implicated. Many ethnopharmaceutical systems are linked to specific rituals, ceremonies, and community gatherings. Much of the healing process involves complex pre- and post-consultation treatments, including divinations for diagnosis and the offering of ritual sacrifices, and healing services are often provided at certain times of the week or year when the moon is in a specific phase. Those seeking treatment must follow a series of complex conventions: to not eat certain foods, not disclose healing to others, or follow a particular lifestyle. Such practices, often occult to patients, serve to legitimize and construct the efficacy of treatments. Furthermore, the reliability of the local treatment process generally includes shared cultural representations of health and illness. This constructed knowledge informs local healers' mental frames of healing and is passed down through oral and traditional practices [13, 14].

Challenges In the Use of Medicinal Plants

As the use of complementary and alternative medicine grows around the world, the number of health care providers, ethicists, and others who want to critically assess the medicinal plants in question increases. Several difficulties arise regarding these plants that can impede useful discourse, including issues concerning the biodiversity of the plants, sustainable and ethical harvesting, and good agricultural practices (GAPs), as well as the myriads of regulatory hurdles that need to be cleared before herbal

therapy can be properly integrated into industrialized health care systems. Not the least of these challenges is that herbal products vary greatly from batch to batch in potency and in the quality of raw materials, which, over the past 50 years, has repeatedly raised issues of safety and efficacy in the mainstream pharmaceutical literature. Various aspects of traditional medicine, mainly herbal therapy, remain immensely popular in developing countries but are simultaneously shrouded in misinformation, superstition, and skepticism by the mainstream medical community in North America and Europe. Commercialization and globalization have resulted in plants and intellectual property being transferred between the indigenous, local medical communities and the developed world, often resulting in harm to the former. Despite the importance of traditional medicine and medicinal plants for developing countries, relatively few high-quality, impartial research articles discuss their role and importance in combating chronic and infectious diseases. Often, research is biased in favor of potentially high-dollar 'nutraceuticals,' as opposed to the simple teas and traditional practices that together form the basis for herbal therapy for the majority of the developing world. An examination of traditional medicines reveals that 80–85% of the people in the developing world continue to rely on plant-based pharmacy for most of their primary healthcare needs. This form of therapy is known to be useful in the treatment of both chronic and infectious diseases, although there is a paucity of scientific research supporting these practices. Medicinal plants are increasingly viewed as panaceas capable of treating every ailment. For instance, South Africa has a relatively rich store of 'health plants,' with nearly 3,000 species known to be used by its traditional healer community, which treats more than 70% of South Africa's black population. However, the divergent flora of different countries and regions assures that, for the most part, traditional pharmacopoeias remain local, and along with their use, the knowledge of the correct method of identification and application disseminated historically from generation to generation is lost [15, 16].

Future Directions in Research

For centuries, people around the world have used medicinal plants, fungi, or other natural remedies to address chronic conditions. In the past 20 years, scientific research on medicinal plants steadily expanded, examining local pharmacopoeias that work well in healthcare systems. However, few scientists and practitioners bothered to explore the cultural dimension of the local pharmacopoeias. There is nothing documented on whether certain illnesses can or cannot be cured by medicinal plants or how to combine different plant species. This is the local medical knowledge, and local health practitioners have accumulated it through centuries of trial and error. An approach that combines local wisdom and Western understanding may help manage the local resources more effectively. At the cross-section of disciplines, ethnobotany has developed methodologies to study the development, functioning, and dissemination of the local medical knowledge. Ethnobotanical field studies may use semi-directive interviews to collect data on medical knowledge. Local pharmacopoeias are always dynamic and in constant evolution; threats like land degradation, pollution, or economic changes may accelerate such changes, leading to the loss of valuable resources. Ethnobotanical field studies also have an applied potential to support healthcare services. Data can be used to reconnect local health practitioners with official healthcare providers or as a basis for health education campaigns. There is scope to explore the landscape in terms of biodiversity, use diversity, and medicinal plant uses. In the latter respect, comparison of the local pharmacopoeias of adjacent or distant groups is particularly interesting. Ethnobotanical knowledge has to be critically analyzed, as it may reinforce the existing power disparities or interfere with human rights. Renewed attention has to be devoted to the land use practices of the communities that have accumulated local pharmacopoeias of a special value. Furthermore, these communities should be acknowledged as holders of the local pharmacopoeias that have to be respected in case of exploitation [17, 18].

Case Studies of Successful Treatments

Medicinal plants used in traditional medicine systems have been considered important parts of cultural heritage. Hence, the loss of a plant species due to overharvesting or the loss of traditional knowledge is not only a great threat to people's well-being but also a threat to the "ethnosphere" of a culture. Traditional medicine is still used for the treatment of disease by the majority of the world's population, especially for people in developing countries who have limited access to modern medicine. There is renewed interest in traditional medicine in developing countries, especially for the treatment of chronic and difficult diseases. For example, the World Health Assembly has made different sponsorship appeals to WHO Member States to include traditional medicine into their national health care programs and to take efforts to enhance the safety, efficacy, and quality of traditional medicine. Nevertheless, in spite of

considerable research efforts and notable achievements in developing countries, traditional Chinese medicine, Ayurveda, and other traditional medical systems, the many facets of the therapeutic effect of traditional medicine are still little known to biomedicine. In particular, the mechanisms of disease treatment, the principles of traditional diagnosis, and the functions of many herbal drugs and their associated dietary restriction are still waiting for answers. There are also only a few biological or clinical explorations of next-generation herbal drugs emerging from the intersection of traditional medicine systems and biomedicine [19, 20].

The Role of Education and Awareness

First and second-generation Hispanics are making significant efforts and expenditures to keep their cultural traditions alive. However, those born in the United States are often losing traditional knowledge at a precipitate rate. To prevent this loss, it is suggested that botanical courses be implemented in the school systems and to encourage those preparing for the healthcare profession be encouraged to take courses in herbalism. Medicinal plants and the traditional use of these plants could be included in either the Health Care Professional's curriculum, the biology curriculum, and/or the Ethno courses. Pharmacists should also be urged to apply this technique and become liaisons in the health care profession to divulge herbal use. In this way, it is hopeful that the traditional values, now being kept alive by the immigrants, will soon find root in the rest of American society that seems to have been losing the value of healing through the plants. The Price family shampoos their heads with a brew of "peonia" or white rose. The Mares family makes a tea from several small "florecitas" to take off the "calentura.", Faulk's grandmother uses a plant called "aura" to bathe the baby when he gets the chickenpox, the casts, and the mal ojo. A green leaf called "pata de vaca" is boiled in water and drunk to clean up after an abortion. All this is done with the knowledge of what the plants do but not why, as they put it. Such intimate knowledge of the plants and the way they heal and influence the world permeates a majority of the Hispanic cultures and communities. As much as half of the people struck by diabetes in the Latin community use natural remedies recommended by a family member or a close friend before using prescribed medications. The need for more communication between healthcare providers and patients is endless. It is often recommended that doctors talk to their patients, but in these cases, it is very important that they do so. A pharmacist would be able to fill in that gap. The effort in educating the patients to look for a remedy that does not interfere with the prescribed OTC is a very good start. Between the 80 plus Mexicans and the first, second, and third generation Mexicans and Guatemalans, 27 types of medicinal plants were identified, 18 of which were native to the Mexican area, and 3 to the Guatemalan area, the remaining plants have been introduced to these two countries. Some of the plants cultivated in the gardens at this time of the year are aloe vera, rue, mint, and sage. A plant native to Mexico, the daisy, is also being cultivated here in the U.S.A. The chamomile has been found to grow wild in the "Monte" or forests of some areas of Mexico and is also planted in the gardens [21-24].

Global Perspectives on Medicinal Plants

Herbal therapies are currently one of the most common forms of alternative medicine, particularly for the treatment of chronic conditions, thanks to their positive social acceptability and perceived reduced danger, given that they are natural substances and have been available for thousands of years as part of local tradition. With the growing international interest in "medicinal herbs," their global perspective is considered through an evaluation of the use practices of Japan, South Korea, and Taiwan. Although medicinal resources and medical institutions are quite different among these countries and areas, some common factors lead to the development of herbal medicine: an established historical framework, the informal existence of traditional medicinal practices, a basic cosmology, adoption of character-based writing leading to a written record with medical compilations, the influence of Chinese culture, and development of strict state pharmacopeias for the regulation of medical practices. The common usage practices identified were: an importation of a model of medicinal herbs, application of rituals and methods that stem from similar usage practices, extensive borrowing of medical ideas and texts from classical Chinese medicine, the recording of local knowledge that parallels the concerns of Chinese herb medicine, and the vertical integration of traditional administration within established modern medical care. While industrialism has played an important role in "modernity," it has left a unique social and historical stamp on each society. Comparisons showed that recent political history is important, and the Western practice maintains "innovation" more rapidly than those in the East [25-27].

CONCLUSION

Medicinal plants continue to serve as vital therapeutic agents for chronic conditions, deeply embedded in cultural traditions worldwide. While their historical use is well-documented, the challenge lies in integrating traditional healing knowledge with modern scientific validation. Issues such as standardization, sustainability, and ethical considerations must be addressed to ensure the responsible use of these natural remedies. By fostering interdisciplinary research and cross-cultural dialogue, traditional medicine can complement modern healthcare, offering holistic, affordable, and accessible treatments for diverse populations. Future efforts should focus on preserving indigenous knowledge, enhancing regulatory frameworks, and advancing scientific studies to unlock the full potential of medicinal plants in chronic disease management.

REFERENCES

1. Rief W. Fear of adverse effects and COVID-19 vaccine hesitancy: recommendations of the treatment expectation expert group. In JAMA Health Forum 2021 Apr 1 (Vol. 2, No. 4, pp. e210804–e210804). American Medical Association.
2. Dailah HG. The ethnomedicinal evidences pertaining to traditional medicinal herbs used in the treatment of respiratory illnesses and disorders in Saudi Arabia: A review. Saudi Journal of Biological Sciences. 2022 Sep 1;29(9):103386.
3. Feder Y. Purity and pollution in the Hebrew Bible: from embodied experience to moral metaphor. Cambridge University Press; 2021 Nov 18.
4. Kuug AK, James S, Sihaam JB. Exploring the cultural perspectives and implications of infertility among couples in the Talensi and Nabdam Districts of the upper east region of Ghana. Contraception and Reproductive Medicine. 2023 Apr 19;8(1):28.
5. Sõukand R, Kalle R, Pieroni A. Homogenisation of biocultural diversity: Plant ethnomedicine and its diachronic change in Setomaa and Võromaa, Estonia, in the last century. Biology. 2022 Feb;11(2):192.
6. Frazão-Moreira A. The symbolic efficacy of medicinal plants: practices, knowledge, and religious beliefs amongst the Nalu healers of Guinea-Bissau. Journal of ethnobiology and ethnomedicine. 2016 Dec;12:1-5.
7. Haq SM, Khoja AA, Waheed M, Pieroni A, Siddiqui MH, Bussmann RW. Plant cultural indicators of forest resources from the Himalayan high mountains: implications for improving agricultural resilience, subsistence, and forest restoration. Journal of Ethnobiology and Ethnomedicine. 2024 Apr 24;20(1):44.
8. Reyes-García V. The relevance of traditional knowledge systems for ethnopharmacological research: theoretical and methodological contributions. Journal of ethnobiology and ethnomedicine. 2010 Dec;6:1-2.
9. Ugwu CN, Ugwu OP, Alum EU, Eze VH, Basajja M, Ugwu JN, Ogenyi FC, Ejemot-Nwadiaro RI, Okon MB, Egba SI, Uti DE. Sustainable development goals (SDGs) and resilient healthcare systems: Addressing medicine and public health challenges in conflict zones. Medicine. 2025 Feb 14;104(7):e41535.
10. Wang Z, Luo W, Cheng S, Zhang H, Zong J, Zhang Z. Ralstonia solanacearum—a soil borne hidden enemy of plants: research development in management strategies, their action mechanism and challenges. Frontiers in plant science. 2023 Feb 24;14:1141902. [frontiersin.org](https://www.frontiersin.org)
11. Craig WJ, Mangels AR, Fresán U, Marsh K, Miles FL, Saunders AV, Haddad EH, Heskey CE, Johnston P, Larson-Meyer E, Orlich M. The safe and effective use of plant-based diets with guidelines for health professionals. Nutrients. 2021 Nov 19;13(11):4144. [mdpi.com](https://www.mdpi.com)
12. Chintada V, Golla N. Exploring the Therapeutic Potential of Bioactive Compounds from Plant Sources. In Biotechnological Intervention in Production of Bioactive Compounds: Biosynthesis, Characterization and Applications 2025 Feb 26 (pp. 229-247). Cham: Springer Nature Switzerland. [HTML]
13. Vaou N, Stavropoulou E, Voudarou C, Tsigalou C, Bezirtzoglou E. Towards advances in medicinal plant antimicrobial activity: A review study on challenges and future perspectives. Microorganisms. 2021 Sep 27;9(10):2041. [mdpi.com](https://www.mdpi.com)
14. Awoke A, Cosendey BN. Investigate the Ethnomedical Practices of Different Indigenous Communities: A literature Review. International Journal of Ethnoscience and Technology in Education. 2025 Mar 1;2(1):64-89. [researchgate.net](https://www.researchgate.net)

15. Bhatt S, Kumar A, Arunachalam A, Arunachalam K. Ethnomedicinal diversity and traditional knowledge system of the jaunsari tribe in Uttarakhand, Western Himalaya. *Proceedings of the National Academy of Sciences, India Section B: Biological Sciences*. 2024 Feb;94(1):177-92. researchgate.net
16. Edyedu I, Ugwu OP, Ugwu CN, Alum EU, Eze VH, Basajja M, Ugwu JN, Ogenyi FC, Ejemot-Nwadiaro RI, Okon MB, Egba SI. The role of pharmacological interventions in managing urological complications during pregnancy and childbirth: A review. *Medicine*. 2025 Feb 14;104(7):e41381.
17. Adetunji CO, Michael OS, Akram M, Oseni K, Anani OA, Nwankwo W, Anwar H, Adetunji JB, Olayinka AS. Recent advances in the utilization of bioengineered plant-based nanoparticles: A sustainable nanobiotechnology for the management of extensively drug-resistant tuberculosis. *Green Synthesis in Nanomedicine and Human Health*. 2021 Mar 9:149-66. [\[HTML\]](#)
18. Herdiana Y, Sofian FF, Shamsuddin S, Rusdiana T. Towards halal pharmaceutical: Exploring alternatives to animal-based ingredients. *Heliyon*. 2024 Jan 15;10(1).
19. Balkrishna A, Sharma N, Srivastava D, Kukreti A, Srivastava S, Arya V. Exploring the safety, efficacy, and bioactivity of herbal medicines: Bridging traditional wisdom and modern science in healthcare. *Future Integrative Medicine*. 2024 Mar 25;3(1):35-49. xiahepublishing.com
20. Maleki Varnosfaderani S, Forouzanfar M. The role of AI in hospitals and clinics: transforming healthcare in the 21st century. *Bioengineering*. 2024 Mar 29;11(4):337.
21. Lee DY, Li QY, Liu J, Efferth T. Traditional Chinese herbal medicine at the forefront battle against COVID-19: Clinical experience and scientific basis. *Phytomedicine*. 2021 Jan 1;80:153337.
22. Zhang X, Qiu H, Li C, Cai P, Qi F. The positive role of traditional Chinese medicine as an adjunctive therapy for cancer. *Bioscience trends*. 2021 Oct 31;15(5):283-98.
23. Cruz ML, Christie S, Allen E, Meza E, Nápoles AM, Mehta KM. Traditional healers as health care providers for the Latine community in the United States, a systematic review. *Health equity*. 2022 Jun 1;6(1):412-26. liebertpub.com
24. Paul-Chima UO, Ugwu CN, Alum EU. Integrated approaches in nutraceutical delivery systems: optimizing ADME dynamics for enhanced therapeutic potency and clinical impact. *RPS Pharmacy and Pharmacology Reports*. 2024 Oct;3(4):rqae024.
25. Rohloff P, Flood D, Tuiz E, Kurschner S, Nandi M, Tschida S, Wilcox K, Chary A. Adults' experiences with type 2 diabetes in rural Guatemala: a qualitative study. *Journal of health care for the poor and underserved*. 2023;34(1):208-23. nih.gov
26. Blahova J, Martiniakova M, Babikova M, Kovacova V, Mondockova V, Omelka R. Pharmaceutical drugs and natural therapeutic products for the treatment of type 2 diabetes mellitus. *Pharmaceuticals*. 2021 Aug 17;14(8):806. mdpi.com
27. Sun W, Shahrajabian MH. Therapeutic potential of phenolic compounds in medicinal plants—Natural health products for human health. *Molecules*. 2023 Feb 15;28(4):1845.

CITE AS: Odile Patrick Thalia. (2025). The Cultural Significance of Medicinal Plants in Treating Chronic Conditions. Newport International Journal of Research in Medical Sciences, 6(2):59-65
<https://doi.org/10.59298/NIJRMS/2025/6.2.5965>